COTTON CHATS

FROM

DRAPER COMPANY

SHIPMAN'S
COMMON-SENSE BINDER

PATENTED

JANUARY 19, 1892. APRIL 19, 1904

To open binder, remove the slides from fasteners raise the fasteners to an erect position and then file papers. For punching: lay the papers on covers and mark sheets to correspond with fasteners.

If DUPLICATE is wanted ORDER 25981

ASA L. SHIPMAN'S SONS
MANUFACTURERS,
NEW YORK.

COTTON CHATS

By the Secretary of the

DRAPER COMPANY,

HOPEDALE, MASS.

No. 22. DECEMBER, 1903.

NOW IS THE TIME.

The situation in the cotton trade at present is, to say the least, peculiar, raw material selling at almost prohibitive figures, and small demand for finished goods. With these conditions, there is not much encouragement for the enlargement of plants to increase product. There is, however, valid reason why the cost of production should be decreased. The substitution of Northrop for common looms in a mill now running involves no outlay for floor-space or power. It decreases the number of operatives to look after, pay off, and provide tenements for. It probably will increase production somewhat, as the Northrop looms can turn off a higher percentage of product; and, most important of all, it will allow a reduction of at least one-half in the labor cost of weaving, and still give a better wage to the weaver. It is possible that these facts have been mentioned by us before. Advice of this nature, however, is not productive of result unless it appeals at the proper moment. We believe at no other time has the necessity for the Northrop loom been so apparent. There is no longer any excuse for those who were waiting to see whether this loom could weave their goods. It is weaving fine goods; coarse goods; 2-harness, and 20-harness. It runs with either bobbins or cops. It makes either narrow or wide goods. It will weave cloth, if necessary, without a mispick, and without a thick or thin place.

Our total shipments for this year will be greater than ever before. Nearly all of our earlier customers have doubled their mills, and doubled their equipment of Northrop looms. If these facts do not furnish arguments worthy of consideration, the whole experience of progressive industry to date is based on false assumptions.

THE FIRST FILLING-CHANGER.

According to our own patent investigation, and that of other independent students of the question, the first attempt in the line of changing filling by substitution of one shuttle for another, is shown in the English patent of Charles Parker, No. 8664 of 1840. The specification was acknowledged on the 19th day of April, 1841, and inrolled the 22d of April, 1841. The next invention in this line is of the year 1852, showing quite a lapse between. The Parker device operated by means of a finger in the shuttle, which was normally prevented from projecting outside the body of the shuttle by the tension of the weft. When weft broke or ran out, the finger was released and forced outside the shuttle by a spring to strike a catch, to set in motion the mechanism, and shift the shuttle boxes which held the reserve shuttles. There is no evidence that this invention was ever put into use, and the absence of several important elements since found necessary in such mechanism would seem to show that the patent was not drawn from an operating device.

While the vast amount of invention and experiment in the line of shuttle-changing looms has never proved of advantage in the art, except perhaps to stimulate the invention of changing the filling in the shuttle, it would be of interest to definitely determine who first conceived the idea. Now, there is a noted work on weaving, issued in 1844 by an American weaver and manufacturer, Clinton G. Gilroy, which in a satirical and humorous vein, refers to the loom of Arphaxad, explained to Deioces, the first king of the Medes. In the description of this loom it states;

"*In order to avoid stopping the motion of the loom when one or more of the weft threads break, or become exhausted, a few spare shuttles are to be lodged in suitable receptacles, which are so arranged that the mere breaking of a weft thread will cause a change of shuttle instantaneously (by the substitution of a spare one in its stead.)*" The detail of the operation is described at some length; also the mechanism by which the loom will stop, supposing the total number of shuttles to be exhausted. He also describes a shuttle-changer for application to different colors of weft yarn to produce patterns in the cloth. The operation of the change of filling through the shuttle is somewhat similar to that in the Parker patent, but other

details are described which would seem to show that the author was not following the Parker patent in his thought; and there is, of course, no proof that he had ever seen the Parker patent. Curiously enough, he also anticipated the necessity for providing against warp faults in an automatic loom by description of a curious alarm mechanism, by which the breakage of a warp thread would cause a trumpet to blow. This whole idea was conceived in a spirit of "foolery," and also as an indirect satire on our patent system. It would, of course, be unfair to a practical inventor to have such an imaginative fantasy put forth as anticipation; but inasmuch as all of these shuttle-changing ideas were in the nature of fantasies themselves, it might be noted that it is possible that Gilroy unconsciously suggested the vital principle, which has been shown to be of such great advantage at the present time. Of course, Gilroy's book issued later than Parker's patent. Those of us, however, who know how long it takes to compile a work like Gilroy's, in which there are some 574 pages, can easily understand that its contents might have been prepared several years in advance of the publication. Gilroy certainly shows himself to be a most curious genius by his literary efforts alone, and he was also an inventor of considerable prominence in the weaving line.

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Although Mr. Gilroy is quite severe on various inventors with regard to their patent claims for priority, he recognizes the rotary temple as being the fundamental invention of Ira Draper, devoting several paragraphs to a technical explanation of its construction and advantages.

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We have been asked more than once why it is that the shuttles in a Northrop loom fail to throw out of the loom like the common shuttle; in fact, our shuttles stay in the shade so uniformly as to question the need for shuttle guards. The reason is easily seen on investigation. Shuttles are thrown out of looms for several possible causes, but the most frequent one is the formation of floats, or the preliminary to a pickout. All of our looms will stop before a float can make serious trouble, and our steel harness warp-

stop type will stop the loom before the warp threads can tangle sufficiently to swerve the shuttle from its proper course.

We started years ago in the belief that our steel-harness type was best worthy of development, and we are today of the same opinion. Recent improvements now ready for trial not only make the steel-harness perfectly applicable for multiple harness weaves, but also introduce a novelty in shedding mechanisms, about which we shall have more to say later on. Our steel-harness not only outwears cotton harness fully ten to one, if not more, but it also cheapens the cost of drawing-in, which is a very serious matter on coarse warps.

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PATENT INFRINGEMENT.

We are sending to our customers a copy of the decision just handed down by Judge Aldrich in the Massachusetts Circuit Court in the suit of Henry M. Hewes v. Draper Company. The complainant contended that our Northrop Loom Shuttles infringed a patent of J. H. Nason, of which he held possession. The bill was dismissed with costs.

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We also note by the *Charlotte Observer* that Judge Boyd of the U. S. District Court at Statesville, N. C., has signed a decree in favor of the Sawyer Spindle Co. in their suit against the Lily Mills of Spray, N. C., for using spindles imported from England and held to infringe the patent No. 412,996 granted G. E. Taft and H. F. Woodmancy. This patent covers the well known Whitin type of spindle.